

ABSTRACT OF THE DISCLOSURE

[0093] Using spread-spectrum encoding the spread the spectrum of information signals transmitted in an optical communications system enables significantly higher levels of inter-channel interference to be tolerated than in conventional optical communication systems. This allows the bandwidth of the optical channels of the optical communication system to be increased, and the bit rate of the channels to be increased. Applying spread-spectrum encoding to the information signals increases the bit rate of each information signal by a factor of L , but significantly more than L spread-spectrum information signals can be transmitted in the same optical channel and can be successfully recovered at the receiver. Accordingly, using spread spectrum encoding provides a significant increase in the capacity of the optical communication system.